ADSL USB Modem

Use this guide to install the following:

Model No.: USBDSL1

User Guide

⬛LINKSYS®

Package Contents

- Instant Broadband**™** ADSL USB Modem
- One USB Cable
- One Setup CD-ROM
- One User Guide and Registration Card
- One RJ-11 Telephone Wire (not shown)

System Requirements

- Windows 98, 2000, or Millennium
- 300+ mHz Pentium II CPU or compatible system
- ADSL Internet service
- CD-ROM drive

> **Note:** The ADSL USB Modem will not run under
> Windows 95 or Windows NT.

Getting to Know the ADSL USB Modem

Overview

Asymmetric Digital Subscriber Line (ADSL), the most popular residential DSL technology, provides high-speed Internet access over regular, copper phone lines by maximizing bandwidth use. In this way, ADSL Internet service can coexist on the same line as your phone service, without disrupting calls. ADSL is "asymmetric" because it downloads, or receives data, faster than uploads it is transmitted. Asymmetric operation is ideal for home and small office use where files and information are downloaded more frequently than uploaded.

There are several standard types of ADSL modulation techniques, including Discrete Multitone (**DMT**). Your ADSL USB Modem supports the following DSL standards: ANSI T1.413 Issue 2, ITU G.992.1 (**G.DMT**) and ITU G.992.2 (**G.lite**).

The USB Icon

The **USB icon** shown below marks a USB port on a PC or device.

To use this USB device, you must have Windows 98, 2000, or Millennium installed on your PC. If you do not have Windows 98, 2000, or Millennium, this device will not work.

Also, this device requires that a USB port is installed and enabled on your PC. Some PCs have a disabled USB port. If your port doesn't seem to be working, there may be motherboard jumpers or a BIOS menu option that will enable the USB port. See your PC's user guide for details.

Some motherboards have **USB interfaces**, but no ports. You should be able to install your own USB port and attach it to your PC's motherboard using hardware purchased at most computer stores.

The ADSL USB Modem's Rear Panel Ports

USB Port Use this port to connect the USB cable from your PC to your modem.

ADSL Port This port connects your modem to your ADSL line.

The ADSL USB Modem's Front Panel LEDs

ADSL This LED will light up when an ADSL connection is made. It will also flicker when an ADSL connection is being made.

Power The **Power** LED will light up green the modem has successfully connected to your PC and the modem's power is on.

Connecting the ADSL USB Modem to Your PC

Installing the ADSL USB Modem

1. **Plug the rectangular end of the USB cable** into your PC's USB port. Connect the square end of the USB cable into the Modem's USB port. A green **Power** LED will light up, indicating that the modem has been successfully connected to your PC and that its power is on.

2. **Connect a standard phone cable** from the DSL outlet to the DSL port on the ADSL USB Modem.

> **Your hardware installation is now complete.**

Installing the Modem Driver for Windows 98

Windows 98 will automatically detect the ADSL USB Modem once it is connected to the PC. Before the hardware can function properly with your PC, a Windows 98 driver for the ADSL USB modem must be installed.

1. Insert the Setup CD into your CD-ROM drive.

2. When the "Add New Hardware Wizard" window appears, make sure that the Setup CD is in the CD-ROM drive and click **Next**.

3. Select *"Search for the best driver for your device"* and click **Next**.

4. Select *CD-ROM drive* as the location where Windows will search for the driver software and click **Next**.

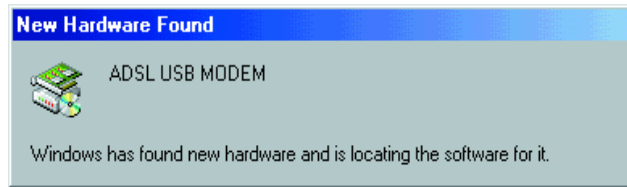5. Windows will notify you that it is ready to install the driver. Click **Next**.

6. After Windows has completed installing this driver, click **Finish.**

Your Windows 98 driver installation for the
ADSL USB Modem is now complete.

Installing the Modem Driver for Windows Millennium

1. Start up your PC in Windows Millennium. Windows will detect new hardware connected to your PC.

2. When Windows asks you for the location of the best driver, select "*Automatic search for a better driver (Recommended)*" and click **Next**.
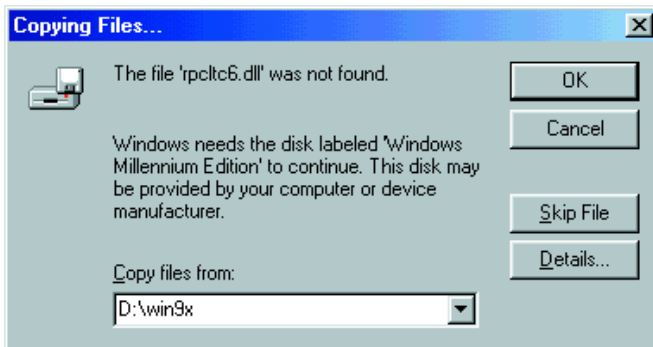

3. Windows will notify you that it has found the driver to install for your modem. Click **Next** to install the driver.

4. When Windows finishes installing the driver, click **Finish**.

5. If Windows asks you for the location of Windows Millennium files, direct your PC to the location of the files and click **OK**.
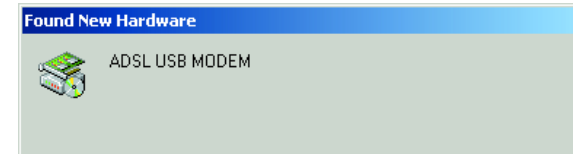

> Your driver installation for Windows
> Millennium is now complete.

Installing the Modem Driver for Windows 2000

Windows 2000 will automatically detect the ADSL USB Modem once it is connected to the PC. Before the modem can function properly with your PC, you must first install a Windows 2000 driver for the modem.

1. Insert the Setup CD into the CD-ROM drive. Windows will notify you that it has detected new hardware.
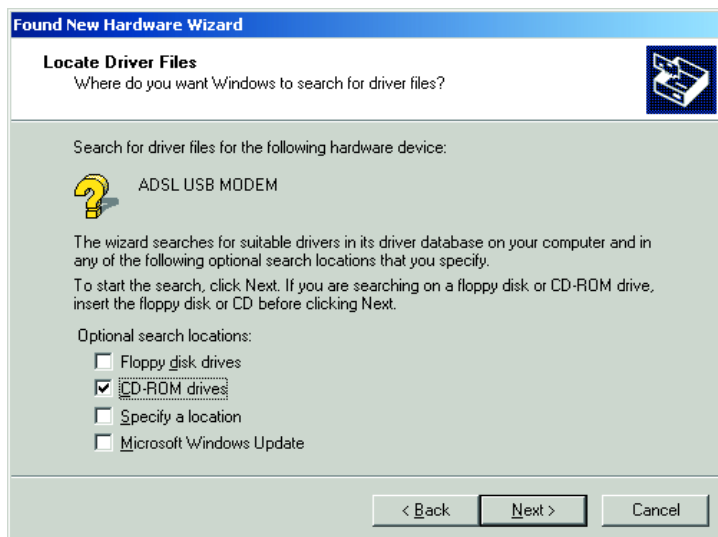

2. When the "Found New Hardware Wizard" screen appears to confirm that the ADSL USB Modem has been connected to your PC, make sure the Setup CD is in the CD-ROM drive and click **Next**.
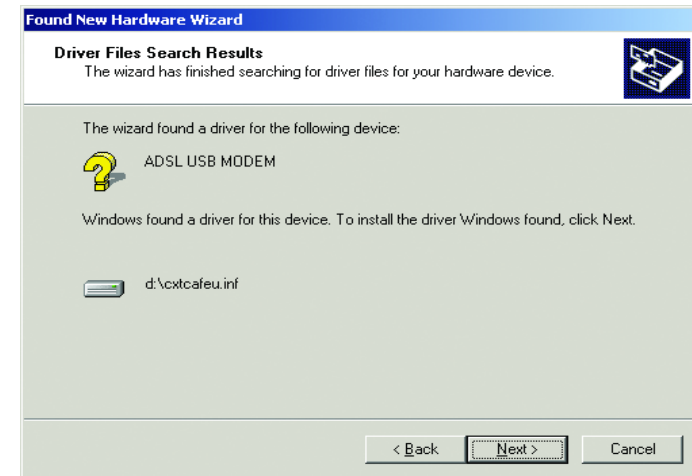
3. Select "*Search for a suitable driver for my device*" and click **Next**.

4. Windows will now search for the driver software. Select *CD-ROM drives* and click **Next**.

5. Windows will notify you that it is ready to install the driver. Click **Next**.
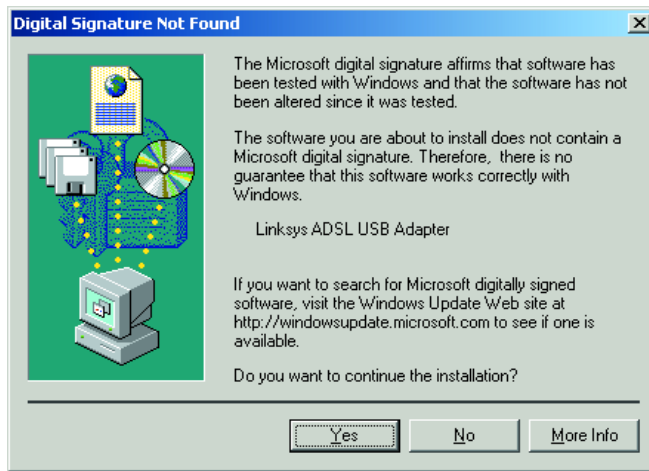

6. When Windows has completed installing the first driver, click **Finish**.

7. When Windows will ask you to search for a digital signature, click **OK** to
finish your installation.

Your Windows 2000 driver installation for
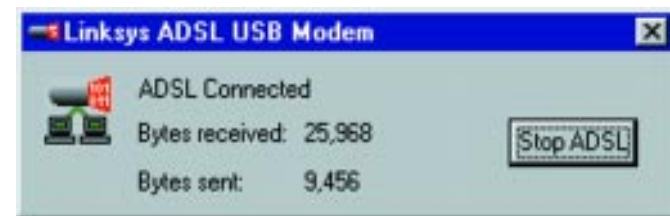the ADSL USB Modem is now complete.

Configuring Your ADSL USB Modem

Now that your installation is complete, you are ready to use your ADSL USB
Modem's Configuration program. The configuration is modified through the
Linksys ADSL USB Adapter Properties screen. You may access this screen
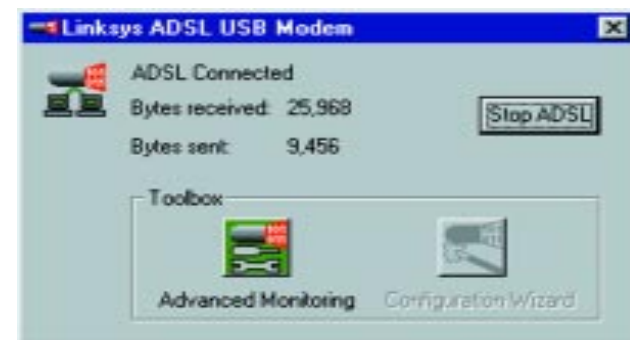one of two ways:

1. Right click on the **Modem Icon** in the system tray (the area next to the
clock) as pictured here.

After right clicking, choose the **Properties** option. The following screen will
appear.

When this screen appears, enter **<Alt>+A**. The following screen will appear.

Click on the **Advanced Monitoring** button and the *Linksys ADSL USB
Adapter Properties* screen will appear.

2. Or, the same screen may be accessed through the **Control Panel** by going to **Start**, **Settings**, **Control Panel**, and click on the **Linksys ADSL USB Modem** icon, shown below.

3. The *Linksys ADSL USB Adapter Properties* window will appear, displaying your current data packet information and whether your DSL connection is up or down. You can click on **Clear** to clear the number of bytes received and transmitted.
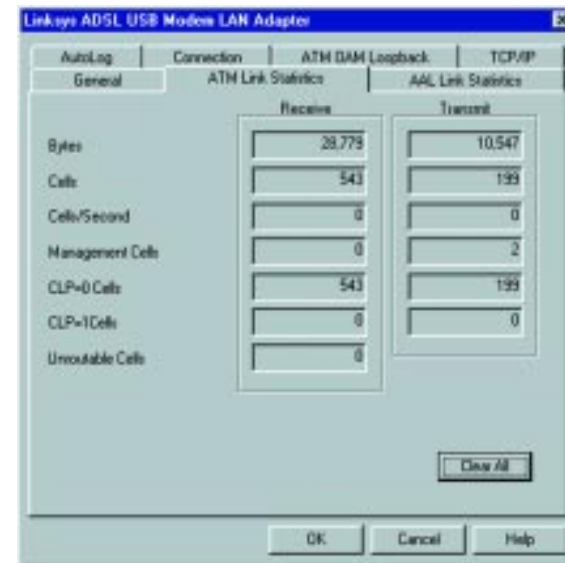
Click **Help** for more detailed help.

4. Press **<Alt>+A** to display the Properties window below. The "General" tab on this screen displays information about your modem connection.
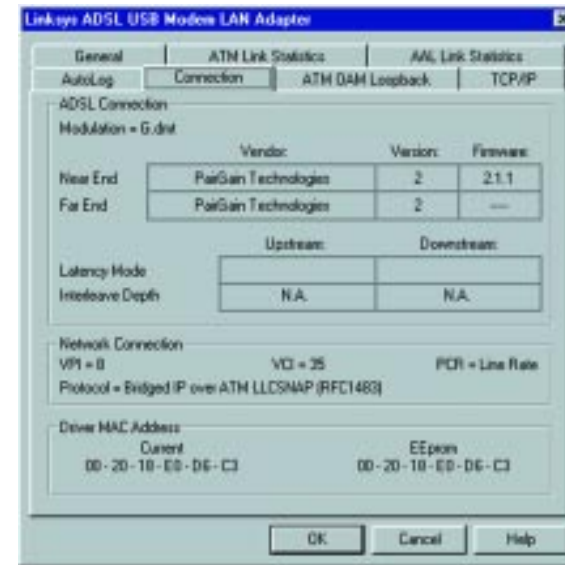

5. Click on the **ATM Link Statistics** tab to display the status of your ATM connection.

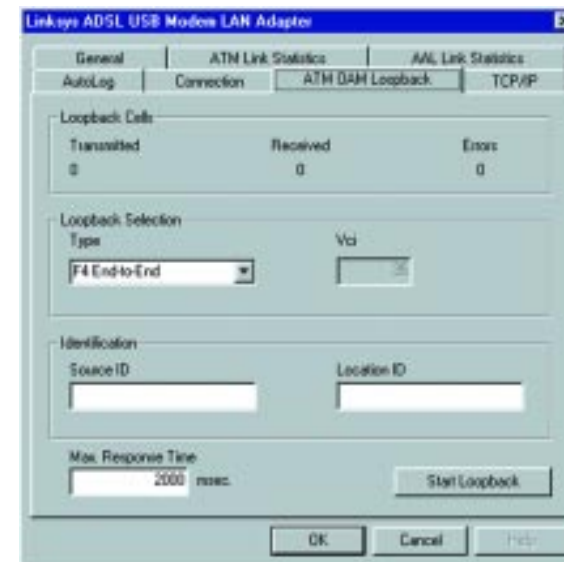6.Click on the **AAL Link Statistics** tab to display information about your AAL Adaption Layer.

7. Click on the **AutoLog** tab to display logging activity. Click on **Enable AutoLog Tool** to activate this feature.

8. Click on the **Connection** tab to display information about what features are enabled when connecting to your provider.
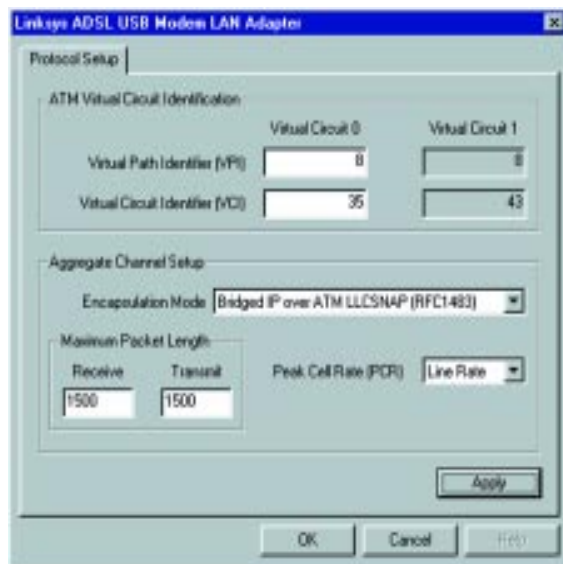

9. Click on the **ATM OAM Loopback** tab to manage the OAM Loopback functions of your modem.

10. Click on the **TCP/IP** tab to display information about your TCP/IP properties and configuration.

11. From the *Linksys ADSL USB Adapter Properties* screen, press **<Alt>+C** to display the Properties window below. The **Protocol Setup** tab on this screen allows you to change your protocol configuration.

12. Press **<Alt>+P** from the *Linksys ADSL USB Adapter Properties* screen to display the Properties window below. As you will notice, this screen contains many of the tabs discussed earlier. The **General** tab displays more detailed information about your modem connection.

13. Click on the **Physical Layer Statistics** tab to display your general power usage information.

14. For information on each of the following tabs, refer to the pages of this guide indicated below:

   ATM Link Statistics - page 17
   AAL Link Statistics - page 18
   Protocol Setup - page 21
   ATM OAM Loopback - page 19
   TCP/IP - page 20
   Conection - page 18
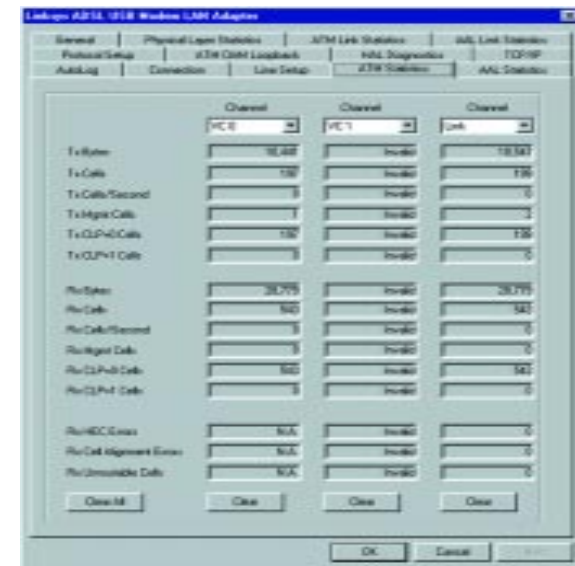   **AutoLog** - page 17

15. Click on the **HAL Diagnostics** tab to obtain information about the average send and receive rates of your modem.

16. Click on the **Line Setup** tab to setup or change the ADSL's operational mode.

17. Click on the **ATM Statistics** tab to give information about your current ATM statistics.

18. Click on the **AAL Statistics** tab to display information about your current AAL statistics.

Troubleshooting

Common Problems and Solutions

This section offers solutions to common issues that may occur during the installation and operation of your ADSL USB Modem.

1. Which protocols might I need to use with my ADSL USB Modem?
   • Refer to the documentation or manual provided by your ISP for details. The protocol required in your configuration depends on the equipment used by your DSL service provider. There are several possibilities:

   a. **Point-to-Point Protocol Over ATM (PPPoA)** (RFC 2364) - PPP provides session setup, user authentication (login), and encapsulation for upper-layer protocols such as IP (Internet Protocol). The use of PPP makes the modem appear as a dial modem to the operating system. Dial-Up Networking is used to establish a connection. PPP is supported by either the WAN (Wide Area Network) driver or the ATM driver.

   b. **Bridged/Routed Ethernet/IP over ATM** (RFC 1483) - This protocol makes the modem appear as a local area network (LAN) device to the operating system.

   c. **Point-to-Point Protocol Over Ethernet** (PPPoE) (RFC 2516) - PPP provides session setup, user authentication (login), and encapsulation for upper-layer protocols such as IP (Internet Protocol). PPP makes the modem appear as a dial modem to the operating system. Dial-Up Networking is used to establish a connection. The protocol must be supported by WinPoet or Enternet 300 logon software on the RFC 1483 driver.

2. Installing the driver software resulted in unexpected errors or warnings.
   Uninstall the ADSL USB Modem driver by doing the following:
   a. Go to **Start**, **Settings**, **Control Panel**, and click on **Add/Remove Programs**.
   b. Highlight *Linksys ADSL USB Modem*.
   c. Close the Control Panel window, and remove the program.

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